In the Office Action, the Examiner at page 2 has imposed an election of species requirement against claims 1-10, and additionally has identified claim 1 as generic. There is therefore inconsistency and confusion in the Office Action, since claims 40-60 are the only pending claims of such application.

For the convenience of the Examiner, a copy of claims 40-60 as presently pending in the application is enclosed, in Appendix A hereof.

Accordingly, the ensuing response will be directed to the pending claims 40-60.

In respect of the species identified by the Examiner, viz., (1) species without oxygen-donor compound(s), and (2) species involving oxygen-donor compound(s), the Examiner appears to be distinguishing the subject matter of the claims in relation to claims 58-60. Claim 58, from which claims 59-60 depend recites, "a composite electrode film including a noble metal and an oxygen-donor compound."

The election of species requirement is traversed, on the basis that it is not based on respective alternative species claimed by applicants, but rather is separating applicants' claims based on a "with"/"without" distinction as regards incorporation in the electrode layers of an oxygen-donor compound. Applicants do not have a claim stating that the top electrode layer is devoid of oxygen-donor compounds - were such the case, the election requirement would be appropriately based, as requiring choice of alternatively claimed subject matter aspects.

Instead, under the Examiner's demarcation of the subject matter, applicants' election of species (1) in essence imports a negative limitation into all of applicants' responsively selected claims - the negative limitation that the electrode does not contain oxygen-donor compounds. Alternatively, if applicants select species (2) claims relating to top electrode layer compositions including oxygen-donor compound(s), the net effect of such election is to import a corresponding affirmative limitation into all of

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applicants' subsequently selected claims - this in turn would have the effect of delimiting applicants' generic claim 40 (in which the top electrode layer is presently recited without restriction as to its composition), so that same would be restricted to the presence of oxygen-donor compounds, despite the fact that on its face it is open-ended with respect to top electrode layer composition.

Faced with this circumstance, applicants elect, with traverse, species (1). The claims readable on such "species" are claims 40-57.

Respectfully submitted,

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APPENDIX A

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PENDING CLAIMS OF ATM-337 RCE

40. A microelectronic device structure including a top electrode layer on a top surface of a ferroelectric oxide or high ε oxide film material, said ferroelectric oxide or high ε oxide film material having a stoichiometric oxygen requirement, wherein a top surface region of the ferroelectric oxide or high ε oxide film material including said top surface and said ferroelectric oxide or high ε oxide film material within a depth of 25 Angstroms measured from said top surface has an oxygen content equal to or in excess of said stoichiometric oxygen requirement of said ferroelectric oxide or high ε oxide film material.

41. A microelectronic device structure according to claim 40, wherein said ferroelectric or high ε film comprises an oxide perovskite or layered structure perovskite.

42. A microelectronic device structure according to claim 40, wherein said ferroelectric or high ε film comprises a material selected from the group consisting of lead zirconium titanate, barium and/or strontium titanates, and strontium bismuth tantalates.

43. A microelectronic device structure according to claim 40, wherein said ferroelectric or high ε film comprises a lead zirconium titanate material.

44. A microelectronic device structure according to claim 40, wherein said ferroelectric or high ε film comprises a barium and/or strontium titanate material.

45. A microelectronic device structure according to claim 40, wherein said ferroelectric or high ε film comprises a strontium bismuth tantalate material.

PENDING CLAIMS OF ATM-337 RCE

46. A microelectronic device structure according to claim 40, wherein said top electrode layer comprises a material selected from Pt, Pt oxides, Ir, Ir oxides, Pd, Pd oxides, Rh, Rh oxides, and compatible mixtures and alloys of the foregoing.

47. A microelectronic device structure according to claim 40, wherein said top electrode layer comprises a Pt material.

48. A microelectronic device structure according to claim 40, wherein said top electrode layer comprises a Pt oxide material.

49. A microelectronic device structure according to claim 40, wherein said top electrode layer is formed of Ir.

50. A microelectronic device structure according to claim 40, wherein said top electrode layer comprises an Ir oxide material.

51. A microelectronic device structure according to claim 40, wherein the top electrode layer is formed of Ir or IrO_2.

52. A microelectronic device structure according to claim 40, wherein the top surface region of the ferroelectric oxide or high ε oxide film material has an oxygen content in excess of said stoichiometric oxygen requirement of said ferroelectric oxide or high ε oxide film material.

53. A microelectronic device structure according to claim 52, wherein said oxygen content in excess of said stoichiometric oxygen requirement of said ferroelectric oxide or high ε oxide film material is present in a lattice portion of said material in said top surface region.

PENDING CLAIMS OF ATM-337 RCE

54. A microelectronic device structure according to claim 52, wherein said oxygen content in excess of said stoichiometric oxygen requirement of said ferroelectric oxide or high ε oxide film material is present in grain boundaries of said material in said top surface region.

55. A microelectronic device structure according to claim 40, wherein the top electrode layer is formed of a pure noble metal.

56. A microelectronic device structure according to claim 40, wherein the top electrode layer comprises a sputtered layer of pure metal formed in the absence, or non-incorporative presence, of oxygen.

57. A microelectronic device structure according to claim 40, wherein the top electrode layer has been formed on the top surface of a ferroelectric oxide or high ε oxide film material, by deposition thereon, and wherein prior to or subsequent to said deposition, the top surface region of the ferroelectric oxide or high ε oxide film material has been ion implanted with oxygen at ion implantation energies greater than 200 electron volts (eV), to provide an oxygen content in said top surface region that is in excess of said stoichiometric oxygen requirement of said ferroelectric oxide or high ε oxide film material.

58. A microelectronic device structure according to claim 40, wherein said top electrode layer comprises a composite electrode film including a noble metal and an oxygen-donor compound.

59. A microelectronic device structure according to claim 58, wherein the oxygen-donor compound is MnO.

PENDING CLAIMS OF ATM-337 RCE

60. A microelectronic device structure according to claim 58, wherein the oxygen-donor compound is CeO_2.